**Purpose and scope**

In most states the jurisdiction for managing the risks associated with induced seismicity related to oil and gas activities rests with a state oil and gas division, board or commission. Recently, the frequency of seismic events that can be linked to underground injection of fluids has increased. Some of these events are occurring in more populated areas that have not previously experienced noticeable seismic activity. Consequently, these events have led to an increased level of public concern and a heightened need for a document that can provide regulatory agencies with a list of the considerations for identifying the likelihood of injection induced seismicity and the tools available for mitigating these events.

This document will provide regulatory agencies with a guide to the elements, causes and effects of induced seismic events. It will also detail the data needs, management tools and public information protocols available to conduct an evaluation of induced seismicity risk, develop strategies for managing associated risks and provide information to the public in a transparent and effective manner. Although this document includes case studies, it must be stressed that no two situations are comparable and the case studies are included only to provide a sense of the breadth of induced seismic events and not to offer a particular methodology for handling a specific event.

In order to provide usable information it was necessary to limit the scope of this document to oil and gas activities that are currently known to present a statistically significant likelihood of inducing felt seismic events of a particular intensity and frequency under specific geologic and operating conditions. As a result, the principal focus of this document is the underground disposal of oilfield produced fluids (including flowback fluids). While other activities such as hydraulic fracturing and enhanced oil and gas recovery may pose some likelihood of inducing felt seismic events, these appear to be less likely than those resulting from the underground disposal of fluids.[1] Therefore, while information concerning these activities is included in this document for completeness, detailed considerations for these activities are not included.

[1] "Induced Seismicity Potential in Energy Technologies", National Academy of Sciences, 2013 263 pp.